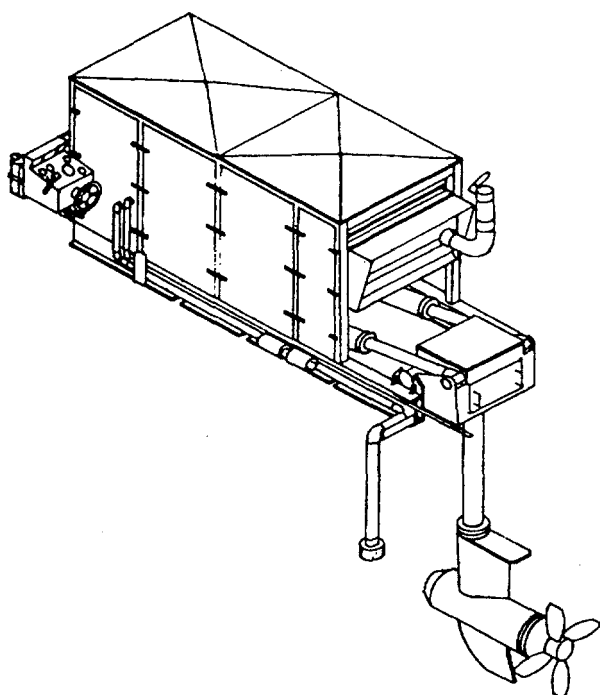


TECHNICAL MANUAL
OPERATOR, UNIT
DIRECT SUPPORT, AND
GENERAL SUPPORT
MAINTENANCE INSTRUCTIONS

PROPELLING UNIT, OUTBOARD
NSN 2010-01-251-2227



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HEADQUARTERS, DEPARTMENT OF THE ARMY

5 APRIL 1991

TECHNICAL MANUAL

No. 5-2010-205-14

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C 5 APRIL 1991

Operator, Unit Direct Support
and General Support Maintenance Manual

Propelling Unit, Outboard Diesel, 165 hp
NSN: 2010-01-251-2227

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistake or if you know of a way to improve the procedures, please let us know. Mail your letter DA FORM 2028 (Recommended Changes to Publications and Blank Forms) or DA Form 2028-2 located in the back of this manual directly to: Commander, U.S. Army Troop Support Command, ATTN: AMSTR-MMTS, 4300 Goodfellow Boulevard, St. Louis, MO 63120-1798. A reply will be furnished directly to you.

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HOW TO USE THIS MANUAL

GENERAL. This manual contains technical description principles of operation and operating instructions for the Propelling Unit, Outboard Diesel, 165 hp. The manual is divided into six (6) chapters:

Chapter 1. **INTRODUCTION.** Provides general information about the propelling unit, identifies the major components and systems and describes how the components or systems work.

Chapter 2. **OPERATING INSTRUCTIONS.** Identifies operating controls and indicators and explains how to use them. This chapter covers preventive maintenance checks and services (PMCS), how to operate the propelling unit and its equipment during usual and unusual conditions.

Chapter 3. **OPERATOR MAINTENANCE.** References the user to the applicable Department of the Army Technical Manuals (DATMs) and includes Lubricating Instructions, troubleshooting procedures, and authorized operator procedures.

Chapter 4. **UNIT MAINTENANCE INSTRUCTIONS.** References the user to applicable Department of the Army Technical Manuals (DATMs) and includes service upon receipt, Preventive Maintenance Checks and Services (PMCS), troubleshooting procedures, Unit maintenance procedures and preparation for storage or shipment.

Chapter 5. **DIRECT SUPPORT MAINTENANCE.** References the user to applicable Department of the Army Manuals (DATMs) as well as the maintenance procedures authorized for Direct Support Maintenance.

Chapter 6. **GENERAL SUPPORT MAINTENANCE.** References the user to applicable Department of the Army Manuals (DATMs) as well as the maintenance procedures authorized for General Support Maintenance.

WARNINGS, CAUTIONS, AND NOTES. Information is provided throughout the manual which does not fit into a procedural step. This information is in the form of **WARNINGS**, **CAUTIONS** and **NOTES**. **WARNINGS** are provided where injury may occur to personnel on or near the equipment. **WARNINGS** headings are underlined and overlined, as shown below:

WARNING

Dry cleaning solvent (Federal Specification PD-680), acetone and methyl ethyl ketone (MEK) are toxic and highly flammable. Use only in a well

HOW TO USE THIS MANUAL - Continued

ventilated area. Avoid prolonged breathing of fumes. Keep solvents away from excessive heat, sparks, or open flame. Always wear eye protection and protective clothing when using solvents.

CAUTIONS are provided where equipment may be damaged but no personal injuries should result. The word **CAUTION** is underlined, as shown below:

CAUTION

Do not hold in START position any longer than necessary to start equipment or the starter will overheat.

NOTES highlight or amplify information to operate the equipment, but no equipment damage or personal injury is involved, as shown below:

NOTE

Engine should start within ten (10) seconds.

WARNINGS, CAUTIONS AND NOTES SHOULD NEVER BE IGNORED.

INTERNAL REFERENCES. In this manual, internal referencing is done by paragraph number. For example: Replace flywheel assembly (para. 5- 18a). The note (para. 5-18a) refers you to Chapter 5, paragraph 18a., of this manual.

For quick reference to an item or procedure, use the alphabetical index in the back of this manual.

EXTERNAL REFERENCES. Referencing outside this manual will be by the military publication number. For example: Clean and lubricate (LO5-2010-205-12). The note (LO5-2010-205-12) refers you to the lubrication order for the Propelling Unit.

PROBLEMS AND MALFUNCTIONS. The propelling unit may not work properly during operation. When malfunctions occur, the operator should refer to the appropriate page of the equipment technical manual and look for the problem in the symptom (malfunction) index of the troubleshooting section. This index will direct the operator to identify exactly what is wrong and how to correct it. The procedure may direct the operator to other sections of the manual, such as Maintenance. When the operator has done all that can be done and the problem still exists,

HOW TO USE THIS MANUAL - Continued

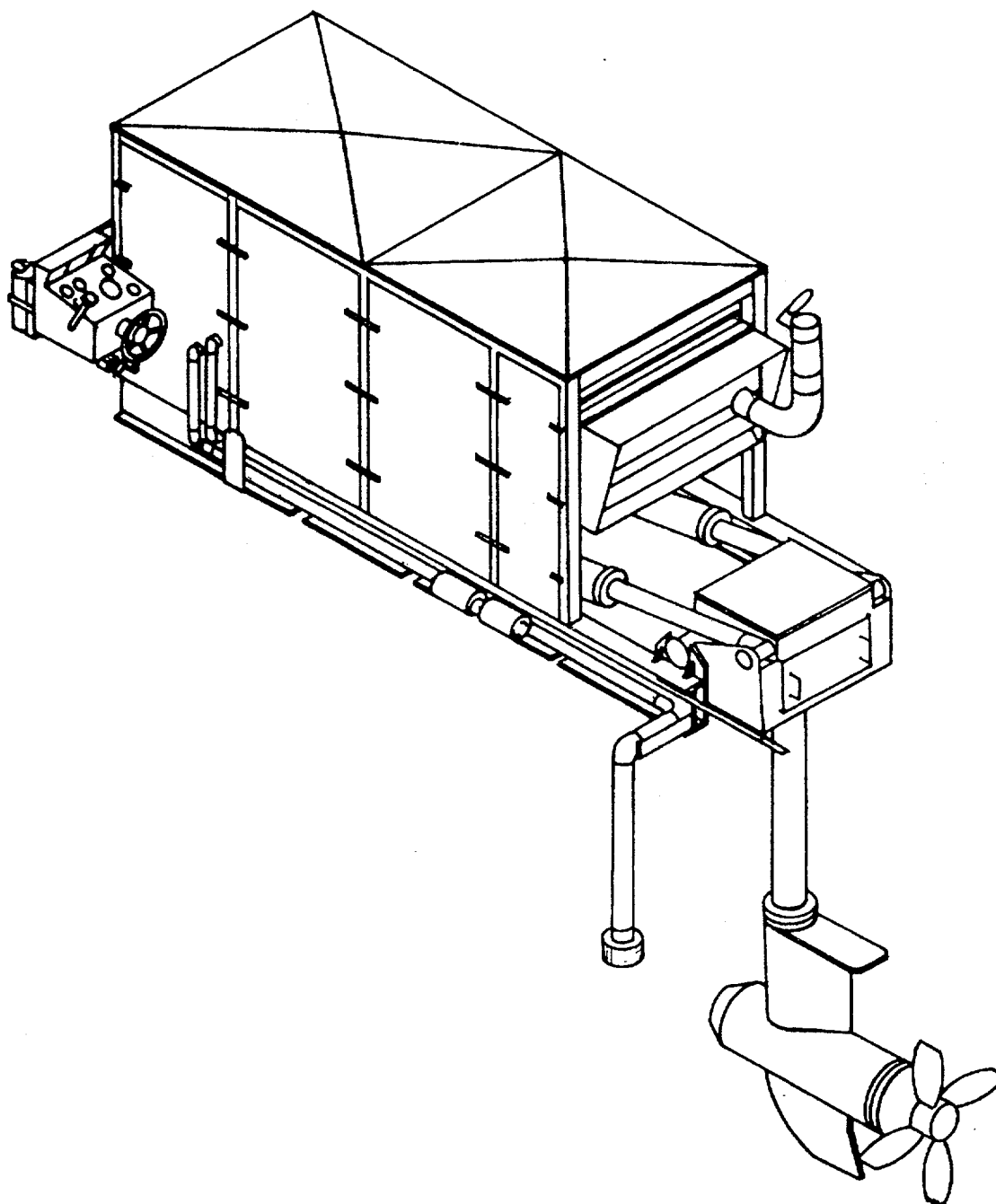
the operator will be directed to notify higher maintenance. If there is no procedure provided in the symptom (malfunction) index to correct the problem, the operator should notify the next higher level of maintenance.

APPENDIXES. There are six (6) appendixes that provide additional information needed to operate the Propelling Unit. Various lists of equipment and supplies and other general information are provided. The appendixes are lettered A through F.

INDEX. Items and operations are listed in alphabetical order with appropriate paragraph number(s).

LOCATION TERMS. The terms starboard (STBD), port, forward, and aft are used to describe areas of the vessel and propelling unit. The location terms refer to the right side (STBD), left side (PORT), front (FORWARD), or rear (AFT).

ILLUSTRATIONS AND TEXT. Locator views are included wherever necessary. An arrow is used to show the general location of the equipment referred to in the text. An arrow connects the point of interest to an overall view of the equipment. Call out numbers identifying parts appear on the illustrations and in parentheses in the text.



Propelling Unit, Outboard

CHAPTER 1

INTRODUCTION

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Section I. GENERAL INFORMATION

1-1. SCOPE

- a. Type of Manual.** Operator, Organizational, Direct Support, and general Support Maintenance Manual.
- b. Model Number and Equipment name.** TMOT-OD-250A, 165 hp Propelling Unit, Outboard, Diesel.
- c. Purpose of Equipment.** Provides main propulsion needed for the barge.

1-2. MAINTENANCE FORMS, RECORDS, AND REPORTS. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-750, the Army Maintenance Management System (TAMMS).

1-3. DESTRUCTION OF ARMY MATERIAL. Refer to TM 750-244-3 for instructions covering the destruction of Army material to prevent enemy use.

1-4. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATION (EIR's). If your propelling unit needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance. Put it on an SF368 (Product Quality Deficiency Report). Mail it to U.S. Army Troop Support Command, ATTN: AMSTR-MOF, 4300 Goodfellow Boulevard, ST. Louis, MO 63120-1798. We'll send you a reply.

1-5. PREPARATION FOR STORAGE OR SHIPMENT. Administrative storage of equipment issued to and used by Army activities will have preventive maintenance performed in accordance with the Preventive Maintenance Checks and Services (PMCS) before stowing. When removing the equipment from administrative storage, the PMCS should be performed to assure operational readiness. Disassembly, and repacking of equipment for shipment or short term storage, are covered in paragraph 4-68, 5-33 and 6-15.